

DRAFT MEETING SUMMARY (v.1)

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HANFORD ADVISORY BOARD

HEALTH SAFETY AND ENVIRONMENTAL PROTECTION COMMITTEE

April 16, 2003

Richland, Washington

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This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Welcome and Introductions

Keith Smith, committee chair, opened the meeting and introductions were made. The August 2002 meeting summary was adopted as final.

Integrated Safety Management Systems (ISMS) – Worker Panel for June Board Meeting

Department of Energy – Richland Operations

Doug Shoop, Department of Energy-Richland Operations (DOE-RL), stated the contractor safety system must describe how the effectiveness of the system will be measured. Fluor and Bechtel have each developed a matrix for the Department of Energy (DOE) to use to determine if the Integrated Safety Management System (ISMS) is working. Both describe the number of Occupational Safety and Health Administration-type (OSHA) violations, missed days of work etc. DOE uses this tool to continually measure whether the contractor's system is working and being used appropriately. These matrixes also review performance measurement and how incidents are reported. Fluor and DOE both use models similar to that of the U.S. Nuclear Regulatory Commission (NRC).

Workers Point of View

John Janskey, Fluor Hanford Safety Representative, said the Voluntary Protection Program (VPP) for the workers is a culture change towards the direction of a fair and equitable safety culture in which the worker can be involved. There is equal membership in this program between the workers and the DOE and in 25 years, it is the only program that the unions have been able to agree upon. Workers are not only safer but incidents are no longer being covered up. Workers truly believe in this program. From the workers' point of view, it is a fair and equitable safety program that they can have ownership of, and have a partnership in with DOE. While it does not directly result in any monetary rewards for the employee, it does result in a safer work environment.

The new environment is more conducive to worker involvement. With the addition of safety representatives from the work force there is now a discussion between the management and the bargaining unit employees. The program has significantly reduced many of the past problems. The Integrated Safety Management (ISM) program does not balance the contractor/worker relationship equally but rather towards the favor of the contractor. There is room for improvement in this program but it is much improved over the past situations.

Committee Discussion

- A committee member asked if ISMS has a component similar to VPP. Doug Shoop responded that DOE does not require contractors to participate in VPP. Many of the contractors have found the program to be of great value especially for employee participation.
- Becky Austin, Fluor, added that VPP began with OSHA as a way to encourage companies to voluntarily sign up to improve workforce safety. While OSHA is not the safety overseer on DOE sites, contractors are required to follow OSHA rules. VPP is an opportunity for companies to receive extra recognition for their safety performance. Fluor chose to be part of the program because workers stated they would like to participate. Doug added that OSHA established the program originally because they thought if a good recognized safety program was put into place, Federal OSHA would not have a need to continually inspect those companies that participated.
- Dennis Faulk, Environmental Protection Agency (EPA), commented the committee should focus on what the safety culture currently is given the impetuous to accelerate cleanup and an explanation of what ISMS is. Are the goals of ISMS still being met given the acceleration? And is there consistency among all three contractors? He added that it has been a struggle at the full Board to talk about safety because the policy questions are hard to pull out. He commented the VPP committee should look at how the program is performing in acceleration. The safety discussion needs to be tied to the acceleration.

- Tom Carpenter noted one of the most common concerns was that contractors had attempted to manipulate accident-reporting data to minimize incident report numbers. The perception is that accidents and injuries are minimized on the reports. If a company enters into VPP will DOE lighten up on inspections like OSHA does or is there a lesser level of inspection? Becky Austin answered she has not noticed inspections lightening up.
- Tim Takaro asked if there is an environmental protection component to VPP. Keith responded that there is not one solely. The program is a culture change that changes the behavior of the employees and encourages them to work as a team. Becky Austin added the culture of the workers taking more care brings about more environmental cautiousness.
- Several committee members commented it is not necessarily harmonious to protect both worker health and environmental health. There are tradeoffs between these. Sometimes it is safer to vent a substance out of a stack into the air rather than to the workers.
- A committee member added it is a challenge to measure the success of a culture change. Obtaining leading indicators can be difficult. He asked if either Doug or Becky feels that the VPP status is a reasonable measure of success with time as the denominator (how long it takes to get there). He suggested they describe to the Board the relative success of the contractors.
- Becky noted that a company may have excellent safety performance and culture and not have VPP status. The DOE has been careful to keep the program voluntary as was originally intended. If the program were made mandatory, DOE believes that it would begin to lose its value.
- A committee member asked if there is an incentive for the contractors to use ISMS. Doug responded that contractors are not paid to work safely; rather they are penalized if they do not. Contractors do not receive any fees if ISMS is not in place.
- Tom agrees that overall the trends are moving in the right direction however; the concern is what to do when employee concerns are not being handled.
- Doug noted that the contractual clause in ISMS does not address safety management. The Department of Energy as a whole does not require a safety management program for acquisition but at Hanford it is required.

Hanford Joint Council

Jim Hanna, Fluor, stated when the budget was reduced, a review of all business practices was completed. A review of the success and the costs associated with the Hanford Joint Council (HJC) was conducted. Conversations were undertaken both internally and with the Council about the future of the HJC. The cost of the HJC in an average year was \$400,000. In the period of 1997-2002 the Council handled eight cases involving 34 employees for Fluor. Three of the eight cases involve 25 employees and are still pending at a cost of over \$3 million. Fluor conducted a thorough evaluation and discussion of the cost impact, and current cost structure to determine whether to proceed with the HJC at a

reduced cost. It was determined that a cost reduction of \$200,000 would be necessary. This reduction would affect the current structure of the program such that it could not continue.

A comparison of the HJC and the employee concerns program for the same period (1997-2002) indicated that the total cost for the employee concerns program during this period was \$1.8 million with 1000 cases being handled. None of these cases proceeded to litigation. While there is still work to be done, some of the issues that resulted in the HJC being formed have improved. The contractors have been instituted mechanisms to better handle concerns in the workplace. The workers and management team are able to meet and address safety issues. This was not happening when the HJC was formed. Each month, these two groups meet to discuss where the problems are, what barriers there are and how to facilitate field issues.

As new challenges come forward, Fluor is willing to bring in third parties to address these however; with the current trends, having the HJC on retainer is not economical. There is still work to do on the program and if Fluor is going to be successful the workers need to feel they are being provided with a safe work environment.

Committee Discussion

- Several committee members asked if Fluor would continue to identify funds for alternative dispute resolution resources. John answered the resources will be available as needed.
- Tim Takaro requested elaboration on the alternative dispute resolution resources. Chris Jensen, Fluor, stated independent arbitrators and mediators from both the local area and elsewhere might be used to hear cases so long as both parties agree. In some cases there may be a need for a body comparable to the HJC if experience with technical and whistleblower issues is needed. Nothing inhibits the developing of panels to look at issues on a case-by-case basis. Internally, an attempt will be made to develop a more structured dispute process. An emphasis on early dispute resolution, with the agreement of all parties, will allow for the opportunity to resolve differences and to mind relationships. This approach will resolve issues more quickly and cost effectively and restore professional relationships.
- Tom, who was a member of the HJC, commented the HJC handled 22 formal cases. Over 100 other cases were handled as referrals and needed quick investigation that resulted in referring them to other programs. Many of these cases had been to other dispute resolution resources first, and had not been resolved satisfactorily. There were 44 high profile cases which the Government Accountability Project (GAP) had previously handled in a high profile way. Prior to the HJC, high profile cases did not have an internal resource, which led to millions of dollars in legal costs. In a goodbye letter to the HJC, the Attorney General stated that the HJC had saved the government millions of dollars. The HJC may no longer be necessary but, new cases are pending and it is unfortunate they will have to be handled the old way instead of through the HJC. He stated that he is sorry to see the voluntary resolution be removed. It was a unique experiment, which was working well.

- Tim Takaro stated the monetary tradeoff does not make sense as alternative dispute resolution resources also cost money. It is difficult to predict how many disputes are likely to occur when developing the budget. When utilizing independent contractors for this work, it does not take long to reach the \$400,000 figure. He is concerned that employees may not view the use of these alternative resources as being as independent as the HJC because the contractor will be paying for the resources.
- John Hanna commented that Fluor has much to lose both financially and in their credibility in the industry if they cannot manage and treat their workforce well. They need the trust of their employees in order to maintain their reputation. The HJC was created because workers did not trust their employers. If the employees do not feel they can report issues and the company must rely on someone else to address these issues, then the company is doomed.
- Margery Swint commented that the council was voluntarily implemented by Fluor and they should be able to give it up. She added that the committee should give the new way a year to see how it works.
- Several committee members asked if John believes the bargaining unit would be willing to wait a year to determine if working without the HJC is satisfactory. John responded that is worth it to try what is in place and that most concerns have been looked at fairly and equitably.
- Stan Branch, DOE Employee Concerns Program Manager, stated that he has added the contract language for all contractors to require that they use mediation as a way to resolve disputes. He has spoken with a number of contractors and the Office of River Protection (ORP), and all parties have agreed to use different approaches to resolve issues including external resources. Stan added that DOE has placed the expectation on the contractor that these programs will be put in place. These will be assessed annually for effectiveness.

Regulator Perspectives

- Joy Turner, Washington State Department of Ecology (Ecology), commented they believed the HJC was a good resource and are disappointed to see it end. Ecology hopes the contractors on site will participate in some form of mediation or alternative dispute resolution in lieu of any other process they have internally.

Medical Monitoring Request for Proposals

Doug Shoop stated that DOE has been working on this Request for Proposal (RFP) for sometime and it was developed using the current contract. All of the comments have been looked at and the responses will be back on May 23. Potential bids will be reviewed using specific criteria for this contract. The contract will be awarded in late July, and on August first a two-month transition period will begin unless it is the same contractor. There are no differences between the new RFP and the current one. The contractor will have to use the Employee Job Task Analysis (EJTA) and Richland Integrated Management System (RIMS) currently in place and will have to improve them.

Committee Discussion

- Margery asked who from an occupational medicine background would audit the performance. Doug responded that they have entered into an agreement with local public health officials to be consultants. They will evaluate the contractors and the proposals received.

Regulator Perspectives

- Joy Turner, Ecology, commented that the eight-hour hazardous waste worker's refresher course has been upgraded and changed significantly. It is now specifically in line with worker protection. A brief presentation may be useful to the committee in determining if it is in line with the ISMS.

Vapors in Tank Farms and Informational Update

Susan Eberlein, CH2M-Hill, gave a brief update on the vapors found in the Tank Farms. A characterization for each tank has been completed and the data collected from samples of the waste and vapors have been used to identify all possible hazards. The biggest hazard identified is ammonia. Usually it is not at a level of concern but there are times, when measured right at the tanks, that a respirator would be required. The human nose is able to smell ammonia at a level significantly below the hazard level.

The characterization information also identified nitrous oxide as an issue. Due to this information, plans have been made to protect the workers when they are working around the tank farm. Real time monitoring will be conducted to determine vapor concentrations and an effort has been made to define those areas that are a danger and to keep workers safe from those. Additionally, there are exclusion zones that require continuous monitoring and respirator use. The respirator protects against particulate material such as nuclear particulates and ammonia and other organic vapors. If a worker is in an area where this type of contamination is known then they must wear a respirator. Outside of areas deemed hazardous they have the option to wear it.

Susan stated that they received more odor complaints because the waste was being moved. Experts were brought in to make recommendations and Hazardous Waste Operations and Emergency Response Regulations (HAZWOPR) training was improved so the workers could better understand what was happening in the tank farms. An attempt is being made to improve overall communication with the workers.

Presentation by Tom Carpenter on Tank Waste Vapors

Tom Carpenter gave a brief presentation on an investigation that the Government Accountability Project (GAP) has conducted regarding the exposure of workers to Hanford tank waste vapors. He referred to a study completed by Batelle in the 1990's, which investigated the numerous health risks associated with Tank C-103. The report discovered that workers exposed to this tank had a 1 in 10 cancer risk. Additionally, it

emphasized that little is known about the effects of the numerous different chemicals present in the tank vapors and the associated health risks.

Over time, DOE-RL has documented numerous problems with the contractor's ability to protect workers from the toxic vapors. Some of the injuries from exposure to these vapors have been permanent in nature and have led to further investigations. These investigations indicated that DOE contractors failed to provide adequate worker protection even after repeated internal warnings from safety experts. A review of these investigations by Office of Technology Assessment found the situation very serious and as a result, Westinghouse Hanford Company, the contractor at the time instituted strict controls including requiring the use of supplied air by workers in the Tank Farms.

There is concern that increased activity in the tank farms may increase exposure rates among the workers. Already, the increase in retrieval operations has resulted in an increasing number of worker exposures to tank vapors. CHG admitted to over 20 exposures in the year 2002. DOE has said they expect exposure rates to increase due to the acceleration of work in the tank farms. Also, questions have been raised about the changing conditions in the tank farms since 1996.

Tank C-103 has historically emitted toxic vapors. There are 12 documented incidents of such. Internal monitoring reports have identified readings of ammonia concentrations in excess of 600 ppm, well above the safety threshold for exposure. There is concern that hundreds of dangerous chemicals and toxins could vent from the tanks. Sometimes the monitoring is performed hours after exposure of workers to the fumes has occurred.

Several recommendations were made in GAP's report. Workers should receive supplied air upon request; conduct a thorough analysis and characterization of tank vapors for worker hazards using sample data from each tank; monitor, record, and report real-time measurements of all tank emissions from all source points for chemical as well as radiological data; CHG should provide continuous real-time monitoring of the atmospheric environment for workers in the tank farm; the buddy system should be reinstated; and an independent medical examination should be completed for workers with alleged medical damages.

Committee Discussion

- Jim asked if Susan would mention other gases that are found in the tank farms and if there is a difference in the vapors at different times of the year. Susan stated that ammonia and nitrous oxide are the most prominent but there are others in the parts per billion levels. Monitoring for combined organics versus individual gases is ongoing. Direct readings are taken from hanging sampling pumps, which collect contaminants in the air, and then specific contaminant levels are broken out. Seasonal differences in contaminant levels have not been noted but there is a difference dependent on what activities are being done, such as if activities that disturb the waste are taking place. In that case, entrained bubbles of gas are released into the air.

- Jim asked what definition of exposure was used in this presentation. Tom stated it was when a complaint was made; they went to a supervisor or sought medical help.
- A committee member asked if these were all individual complaints or was more than one person affected at a time? Tom replied that some of the tanks are worse than others and that there can be individuals in a group affected when no one else is, depending on the activity taking place.
- A committee member asked who determines the monitoring of the tank vapors. Susan replied that it is done by the contractors consistent with DOE's requirements for worker health and with the State Department of Health's requirements for environmental health. For the monitoring, the OSHA requirements are used, and each individual job is looked at. An industrial hygienist performs this work.
- Tom commented that there is a reality disconnect between DOE and the contractors. When workers have concerns and go to the DOE Employee Concern Program, they do not necessarily hear anything back. There are OSHA rules but they are not being fully enforced. The issue is that OSHA does not have to defend the sites they inspect in public; they just make sure the sites are safe. At Hanford, DOE must both enforce safety and defend the site as they own it.
- Tim noted this is an issue still in development. Of concern is the presence of carcinogens that do not have odor alarm levels. These were addressed in the risk assessment done by Pacific Northwest National Laboratory (PNNL). When measuring an individual constituent it may be below the risk level however, when combined with other constituents it may mix differently. Therefore, it may not meet protective levels even though it may meet contract or OSHA standards. The committee needs to take on the systemic issues of how to evaluate risk in this environment.
- John Stanfill noted even though the chemicals are found in low concentrations, there are synergistic effects when mixing different radiological elements, heat levels etc.

Regulator Perspective

- Joy Turner, Ecology, commented that they are gathering information to see what the processes are, and what is being reported. They want to ensure they are permitting correctly and are making sure the workers are safe. Tank vapor is very elusive and the issue is the worker smells the vapor, or gets an uptake and then the hygienist comes to take a reading. At this point, it is very possible the vapor is gone. They are talking to DOE about a way to remedy this situation and are currently in the mode of gathering information.

Committee Business

The committee discussed how to approach the revised draft Hanford Solid Waste Environmental Impact Statement (HSW-EIS), which was recently released for review. It was agreed that a committee of the whole would be the most efficient way to fully

discuss the HSW-EIS. Because the comment period closes on May 27, 2003 any advice on the HSW-EIS would have to be adopted outside of the Board meeting.

The committee also discussed the process for the safety panel at the June Board meeting. The issue managers will work with the contractors and DOE to put together a brief, 5-7 minute tutorial to give the Board an idea of what ISMS and VPP are. The report to the board will address the following issues:

- Introduction to ISMS/VPP.
- Information session.
- What is the safety culture given acceleration?
- What are the goals of ISMS/VPP?
- Are they being met?
- Consistency among contractors?
- Report on positives and concerns.
- Discussion panel agency/contractor/worker perspectives.
- Are the workers going home safe?
- Are we protecting the environment?
- Compare DOE injury and illness record to industry.

The goals of the presentation are:

Has/is acceleration affected/affecting safety at Hanford?

What future work does the committee need to pursue?

An exploration of ISMS/VPP on site.

Handouts

- Health, Safety and Environmental Protection Committee Agenda, April 16, 2003
- Health Risk Assessment for Short and Long-term Worker Inhalation, Pacific Northwest Laboratory, March 1997
- Hanford Site Vapor Exposures, Government Accountability Project, April 16, 2003
- Letter from the Attorney General of Washington, Christine O. Gregorie, March 5, 2003L

Attendees

HAB Members and Alternates

Tom Carpenter	Nanci Peters	Margery Swint
Clare Gilbert	Keith Smith	Jim Trombold
Harold Heacock	John Stanfill	

Others

Stan Branch, DOE-RL	Michelle Anderson-Moore, Ecology	Markis Hughey, CH2MHILL
Doug S. Shoop, DOE-RL	Dennis Faulk, EPA	Joe Rodriguez, CH2MHILL
		Dave Taylor, CH2MHILL
		Liana Herron, EnviroIssues

		Penny Mabie, EnviroIssues
		Becky Austin, Fluor Hanford
		Chris Jensen, Fluor Hanford
		Donna Martinez, Fluor Hanford
		Sharon Braswell, Nuvotec
		Dan Doss, H.A.M.T.C.
		John Jeskey, H.A.M.T.C.